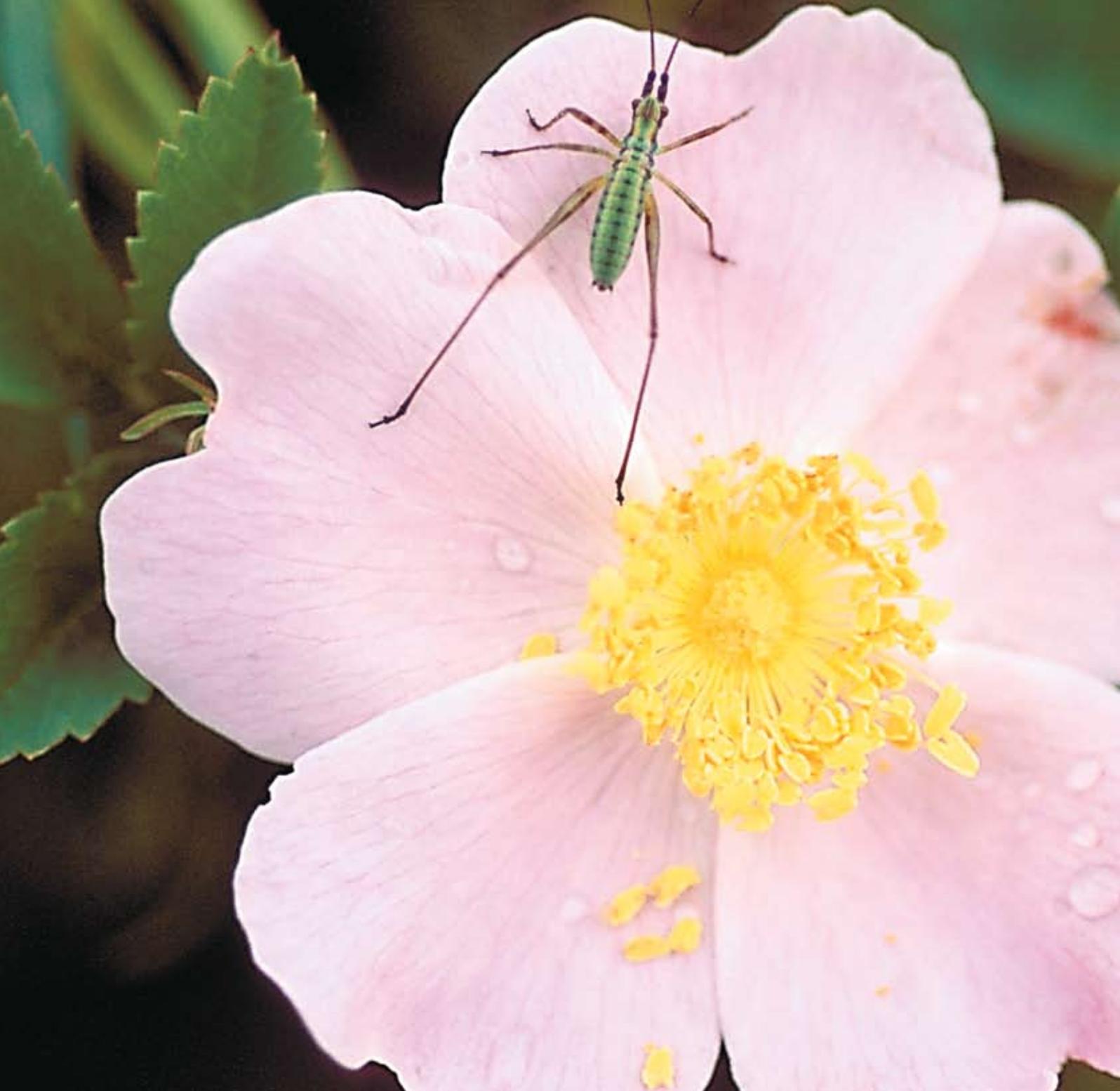


MISSOURI CONSERVATIONIST

May
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Serving Nature & You



Vantage Point

The Interstate Wildlife Violator Compact

Have you noticed the world seems to be getting smaller? When I was a youngster, I lived on a farm in the southeastern Ozarks of Missouri. My world was a tight-knit farming and logging community, and I seldom ventured far from home. It was a treat to go to the small towns nearby, and a trip to Poplar Bluff or St. Louis was unbelievably adventuresome. It was almost unimaginable to travel to another state. Most people in the 1950s and '60s did their business and enjoyed their recreation close to home. Hunting and fishing were local activities, mostly with friends and relatives. Poaching was mostly a local problem, too, and everyone knew who was likely to disregard the wildlife laws.

Things have changed since those days. People seek hunting and fishing opportunities farther and farther from home, including in other states and nations. Unfortunately, poachers are doing the same thing. This means communication and cooperation between the states and between nations have become more important. Conservation law enforcement agencies routinely exchange intelligence information, and wildlife officers connect to each other through such organizations as the North American Wildlife Officers Enforcement Association.

Interstate wildlife violation investigations are becoming more and more commonplace. One such investigation was recently completed by Missouri and Iowa to stop cheaters who were claiming resident hunting and fishing privileges in both states. It is very common for conservation agents to uncover illegal hunting and fishing activities by resident poachers that actually occurred in other states or countries.

One very effective tool used to help stop poaching is the Interstate Wildlife Violator Compact, which Missouri joined in 2000. This Compact is similar to the Interstate Drivers License Compact. The Interstate Wildlife Violator Compact allows Missouri to honor hunting and fishing license revocations from other member states, and vice-versa. When someone's privileges are revoked for wildlife violations in Missouri, those privileges are also revoked in other Compact member states. When someone is prohibited from hunt-



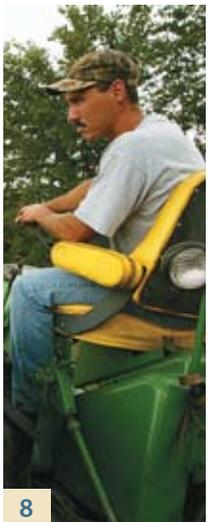
ing or fishing in another member state, we also prohibit them from fishing or hunting in Missouri. After all, we don't want habitual poachers from other states to come to Missouri simply because they can't hunt in their home state.

State membership in the Compact also allows Missourians who receive a wildlife citation in another member state, in most instances, to accept the citation from the officer at the scene of the violation and continue on their way immediately after agreeing to comply with the terms of the citation. Should the person not comply, the state where the violation occurred will provide information to Missouri to begin suspension procedures according to Compact guidelines.

Currently 22 states are members of the Compact, with several other states in the process of becoming members. Revocation of hunting and fishing privileges has been shown to be a great deterrent to would-be wildlife law violators, and cooperation among the states makes it even more effective.

With all our modern advancements, interstate travel and growing human population, the world does seem to be getting smaller. With the advent of the Interstate Wildlife Violator Compact, the poacher's world has suddenly become a little smaller, too.

Dennis Steward, Protection Division Chief



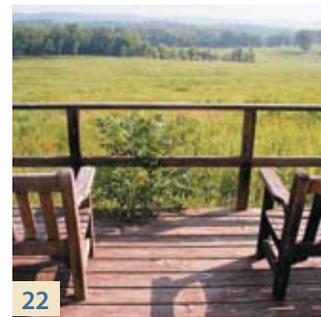
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Tear out this month's insert of our children's magazine on wetlands!



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Reflections

MARTIN MANIA

Wow! What a beautiful cover picture of a purple martin—it's so natural looking. I can hardly wait for the martins to return; I have successfully had martins for a number of years. I have three 12-compartment houses.

I tried putting a mirror in the back of one of my units to discourage a stubborn starling—sure made him mad. I use sparrow door trays and also some wire traps, but still spend a lot of time fighting the starlings and sparrows.

Ruby Henderson, Independence

I really enjoyed your article in the March issue about purple martins. We live west of Lebanon off Highway 64 and had a colony of 193 active pairs last year. Also, Robert Moss, of Sleeper, had 160 active pairs, while Fred and Rosie Pierce in Rogersville had another colony. We thought you might be interested in knowing about these.

Gene & Imogene Pierce, Lebanon

For years I had two 12-apartment martin houses that produced 20 to 22 nests annually. The co-op built an electric substation within roughly 300 feet of the 16-foot houses, and I haven't seen a martin near them since.

Also, Jim Low did an article on myself and hummingbirds back in 1995. It mushroomed into a full page in *Birds & Blooms* magazine, three hardcover books and some newspaper articles. I have had letters and visitors from Cape Breton Island, Nova Scotia to California; even had Harry Truman's pharmacist down here hunting nests. That was 1995 with three feeders. I'm now up to eight with 2 gallons of juice per day. I fed 350 pounds of sugar last year.

John E. Hillman LtCol USAFRet.
via Internet

Editor's note: According to wildlife ecologist Brad Jacobs, it might be impossible to determine why the martins left. It could have been related

to something on their long migration route, such as rainy weather, which is the major killer of martins. After 3 to 4 days of rain and no flying insects to eat, there could have been a massive die-off of martins throughout the rainy region. When die-offs happen, the martin population may take a decade or more to rebound. Then again, your martins may return this year.

WETLAND INITIATIVE HITS 50

In the March issue, you had an article about Missouri's wetlands, with a photo of four men and their birds from 1958. Can you tell me who those men are? My family is from that area and I'm really curious since they were hunters and trappers.

Cecil Jacobs, Meadville.

Editor's note: The photo was taken from our print archives. Unfortunately, the date and location were the only identifying details available. We are now compiling a digital database of our photos to guard against such loss of detail in the future.

I enjoyed reading "Golden Anniversary Wetland Initiative" in your March issue. I've been coming to Missouri to hunt Canada geese for over 30 years. I've seen a lot of changes in hunting opportunity in given areas.

Swan Lake National Wildlife Refuge in the 70s and 80s was as good as it gets. I've also hunted Fountain Grove CA and Duck Creek CA with great luck. Fountain Grove can still be an exciting place to hunt geese.

I know that MDC isn't involved with Swan Lake anymore, but as far as goose hunting goes, both Swan Lake and Duck Creek are known more for what they were, than for what they are now.

David Deike, Wellsburg, IA

Editor's Note: Swan Lake National Wildlife Refuge is managed by the U.S. Fish and Wildlife Service. For more



FRUIT FIGHT!

Joseph Mathews of Chesterfield caught these cedar waxwings competing for fruit in a grove of persimmon trees at Shaw Nature Reserve in Gray Summit. Birds that eat fruit (seeds, nuts or berries) are known as "frugivores." Including native fruit-bearing trees, shrubs and vines in backyard landscaping will attract birds such as waxwings, grosbeaks, cardinals, thrashers, orioles, woodpeckers, jays, chickadees and others. Visit www.GrowNative.org for more information.

information, check out their Web site at www.fws.gov/midwest/SwanLake/, contact John Guthrie, refuge manager, at SwanLake@fws.gov, or write to: 16194 Swan Lake Ave., Sumner, MO 64681. Phone: 660/856-3323. Fax: 660/856-3687. TTY: 800/877-8339.

RESOURCES FOR READERS WITH VISUAL IMPAIRMENT

The Wolfner Library for the Blind and Physically Handicapped is a free library service for Missouri residents who are unable to use standard print materials due to visual or physical disabilities. For more information, contact: Wolfner Library, P.O. Box 387, 600 W.

Main St., Jefferson City, MO 65102-0387. Phone: 573/751-8720 or toll free: 800/392-2614. Fax: 573/526-2985. E-mail: Wolfner@sos.mo.gov. Web site: www.sos.mo.gov/wolfner.

Assistance is also available through Social Services' Rehabilitation Services for the Blind, via the Center for Braille & Narration. For more information, contact: Center for Braille & Narration Production, Attn: Maureen Stocksick, Missouri Rehabilitation Services for the Blind, 615 Howerton Ct., P.O. Box 2320, Jefferson City, MO 65102-2320. Phone: 573/526-0611 or call toll free: 800/592-6004. Fax: 573/526-0611. E-mail: Maureen.Stocksick@dss.mo.gov.

The letters printed here reflect readers' opinions about the Conservationist and its contents. Space limitations prevent us from printing all letters, but we welcome signed comments from our readers. Letters may be edited for length and clarity.

Ask the Ombudsman



Q: I have some bird questions. What can I do about the crazy cardinal flying against my window? Also, what can we do about sparrows taking over our bluebird boxes?

A: Territorial disputes are a regular issue with many birds and it appears your cardinal is having issues with its reflection. Whatever you can do to lessen or eliminate the reflection will be helpful. Some remedies are a little unsightly,

like mylar streamers hung in front of the window. Soaping the window is another method which can discourage this sort of activity. For more information, see these two Web sites: www.missouriconservation.org/nathis/birds/emobirds/question.htm and www.birds.cornell.edu/programs/AllAboutBirds/AttractingBirds/Challenges/WindowCollisions.html.

House sparrows and European starlings are non-native species which have no closed season according to Chapter 7 of the *Missouri Wildlife Code*. Folks with nest boxes are often frustrated by the aggressive behavior of these two birds. As with most problem animal issues, persistence is the key. Removing the nest is a first step, but eliminating the bird is the surest remedy. There are several strategies which can be effective in discouraging unwanted nesters. Here's a Web site which may be helpful: www.birds.cornell.edu/birdhouse/resources/non_native.

Ombudsman Ken Drenon will respond to your questions, suggestions or complaints concerning Conservation Department programs. Write him at P.O. Box 180, Jefferson City, MO 65102-0180, call him at 573/522-4115, ext. 3848, or e-mail him at Ken.Drenon@mdc.mo.gov.

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JEREMY RUZICH



OFF-ROAD

Developers!

**Mountain biking group
creates a trail that makes
everyone happy.**

by John Vogel

St. Charles County, which borders St. Louis, has one of the fastest growing populations in the state. Ask anyone who grew up in the county and they will tell you that its once “country-like” atmosphere has become more “city-like.”

More people bring more demand for additional outdoor recreation opportunities. The 8,106-acre Weldon Spring Conservation Area in St. Charles County has served as a popular destination for hikers, hunters and birdwatchers since it was purchased in 1978. Thanks to the population boom, the area is now attracting more non-traditional users.

For example, the local mountain biking community has taken a liking to the Lost Valley Trail on Weldon Springs. The trail has always been open to bicycles, but in the past only a small group of local mountain bikers rode on it.

The trail was an 8-mile loop that mainly followed gravel service roads and old logging roads, many of which were built in the early 1900s. Over time, several sections of the trail had become heavily eroded, which made them difficult to hike, much less ride a bike on.

In 2003, a local mountain biking organization called the Gateway Off-Road Cyclists (GORC) contacted the Missouri Department of Conservation and volunteered

Adopt a Trail

Help manage your favorite trail on one of Missouri's conservation areas by participating in the Conservation Department's Adopt-A-Trail program. This volunteer program provides opportunities for hikers, bicyclists and equestrians to assist Conservation Area staff by monitoring, maintaining and enhancing trails and trailhead facilities. For more information about trails on conservation areas and the Adopt-A-Trail program, visit www.missouriconservation.org/trails.



GORC volunteers used hand tools to cut erosion-resistant trail sections into the slopes at Weldon Spring. They toiled more than 1,000 hours to improve the Lost Valley Trail.

support to help improve the Lost Valley Trail. The group proposed building some new sections of trail around the more heavily eroded sections.

Initially, area managers had some concern about allowing a volunteer group of off-road cyclists to build new trails that would be used by the public both for hiking and biking. Would the trails be suitable for all types of area users? Could they build new trails through the area's rough terrain that would stand up to heavy use? Could they enlist enough volunteers willing to put in the time to build new trails?

After inspecting some of the group's prior projects and learning more about the trail-building expertise its members could offer, the Department decided GORC could be a valuable asset for the Lost Valley Trail. The group even adopted the Lost Valley Trail through the Department's Adopt-A-Trail Program.

ABOUT GORC

GORC was founded in 1997 by John Donjoian, a local engineer and an avid mountain biker. GORC started as a small, grass-roots group of friends hoping to improve some of their favorite biking trails. In the last few years, GORC has expanded into a well-respected group of trail designers and builders.

The club's 200 members have donated more than 10,000 hours of volunteer labor to design and build more than 20 miles of new trails and maintain and improve more than 50 miles of existing trails for federal, state, local and private agencies. Their work has helped to expand mountain biking opportunities in the greater St. Louis area.

GORC is affiliated with the International Mountain Bicycling Association (IMBA), a nonprofit educational association whose mission is to create, enhance and preserve trail opportunities for mountain bikers worldwide. IMBA encourages low-impact riding, volunteer trail-work participation, cooperation among different trail user groups, grass-roots advocacy, and innovative trail management solutions.

Several of the GORC members have attended professional training programs taught by IMBA to learn more about multi-use trail design and building techniques. GORC members also offer a one-day trail-building class to teach land managers new trail-building techniques.

BUILDING A NEW TRAIL

Repairs on the Lost Valley Trail involved routing three new trails around heavily damaged sections. The new trails had to be designed to dry out quickly so muddy spots would not develop from the heavy amount of

foot traffic and bike use. One of the new trails even involved building a small footbridge to cross a wet-weather drainage.

The project took place in two phases. The first phase was a section of trail just over a mile long that was built in early 2004. The second phase consisted of two new trails totaling almost a mile in length that were finished in Spring 2005.

Designing and building the new trails started with survey work to determine the best routes. The routes needed to be scenic, yet require minimum future maintenance.

Most of the trail building took place during eight workdays. An average of 25 volunteers showed up each of those days to work on the trail. By the time the project was completed, the volunteers had worked more than 1,000 hours.

Because the terrain at Weldon Spring CA is often too steep and rocky for motorized equipment, the volunteers built the new trails entirely with hand tools. First, they cut the trail corridors, using handsaws and loppers to remove small saplings and tree branches. Next, they “grubbed” out the new trail, bench-cutting it into the hillsides, using Pulaskis, McLeods, and pick-axes to move dirt. Their goal was to create a trail surface, or “tread,” with enough slope to let water drain off while still providing a stable walking and riding surface. After they smoothed its surface, the trail was ready for use.

Riding on Conservation Areas

Mountain bikers share trails and conservation areas with other people enjoying the outdoors. Riders will minimize conflicts with other users by adhering to the following rules and guidelines:

1. Ride only on open, designated trails.
2. Groups of more than 10 riders have to obtain a special-use permit from the area manager (see page 1 for regional office phone numbers).
3. Be polite and ready to yield the right of way.
4. Always alert others to your presence.
5. Never scare or chase wildlife.
6. Guard against erosion by not riding when the trail is muddy.
7. Equip your bike and yourself with safety equipment.
8. Carry a cell phone and tell others where you will be riding.
9. Where bicycling is allowed during hunting season, avoid riding during the prime hunting periods of early morning and late afternoon. When on the trail during hunting season, wear bright colors, preferably hunter orange, for maximum visibility.
10. Leave no litter.



The improved Lost Valley Trail opens up the Weldon Spring Conservation Area to more recreational use.

THE RESULTS

The trail improvements have made the Lost Valley Trail a popular destination for both mountain bikers and hikers. The trail now offers a 9-mile loop through the hilly, oak/hickory forest of the Weldon Spring CA. Sections of the trail still use existing service roads on the area, but the new sections wind through mature forests on semi-technical, single-track trails. You can ride or hike past a small waterfall along a creek or near a turn-of-the-century homestead and cemetery. Special features built into the new trail, like the stonework on both sides of one of the creek crossings, help to protect the trail from erosion and keep sediment from entering the creek.

Because Weldon Spring Conservation Area is open until 10 p.m., the Lost Valley Trail offers the unique challenge of night riding to experienced bikers. The late hours also allow a hiking or biking opportunity to those whose workdays end at sunset.

The trail also provides hunters, birdwatchers and a variety of other area users easier access to the Weldon Spring CA.

If you plan to visit the Weldon Spring CA to enjoy the Lost Valley Trail, remember that the area is open during most hunting seasons. You can check at the Department’s St. Louis Regional Office for more details on current hunting seasons.

For more information about trail riding at Weldon Spring Conservation Area, call 636/441-4554, or go to www.missouriconservation.org and type the area’s name into the search field. For information about the Gateway Off-Road Cyclists go to www.gorctrails.com. Their Web site has information about club meetings and activities, and it provides numerous links to other biking sites. ▲

Learning FROM OUR Landowners

A recent Department survey tells us who you are, what you need, and how we can better serve you.

by Brad McCord, photos by Cliff White

Like many Midwestern states, Missouri has seen a shift in land ownership in recent years. Landowners are giving more consideration to devoting land to recreational uses such as hunting, fishing and the overall enjoyment of natural communities. They are also beginning to manage their land with these objectives in mind. However, agriculture and the production of food and fiber remain priorities for most landowners. According to the 2002 Census of Agriculture by the United States Department of Agriculture, 43 percent of the land in Missouri is considered cropland, with another 11 percent each devoted to both pasture and woods.

Landowners contact the Department of Conservation daily to inquire about technical or financial assistance, equipment availability, or to stay in touch with their local conservation agents. Providing beneficial stewardship advice to these individuals engaged in improving and managing fish, forest, and wildlife resources in the state has been a Department priority for years. To that end, the Department's Private Land Services Division developed a survey to gain a better understanding of our performance when working with landowners.

In addition to assessing landowner satisfaction with our services, the survey sought to learn more about the needs of landowners contacting us for assistance. How much land do they own? What types of assistance are they interested in receiving? What management practices are important to them?

Private landowners who contacted the Department for assistance from the years 2000 through 2004 were selected to receive the survey, which was based on previous on-site visits, the development of management plans for fish, forest, or wildlife resources, and experiences with financial assistance.

In April 2005, a Landowner Assistance Program Survey asking 18 questions was mailed to 6,563 Missourians. Fortunately for many species of wildlife, Missouri landowners have a long-held tradition of being

Ninety-five percent of the respondents said the management practices recommended by the Department either "helped very much" or "somewhat."





concerned with soil, water and wildlife resources and provided an outstanding response. A total of 4,266 surveys, or 65 percent, were returned. Many survey experts consider this to be an exceptional response rate.

So who responded to the survey?

The average age of the individuals who responded to the survey was 57.6 years old, with 86 percent reporting that they earned less than 10 percent of their income from farming. Many landowners likely purchased a tract of land with hunting or outdoor recreation as their primary purpose.

From a survey perspective, this is an important question because it helps determine what influences a landowner's decision to manage the property. In many cases, with land that is purchased to produce an income, the landowner is less likely to participate in conservation programs because he or she believes it will take land out of intense agricultural production. However, many of the conservation and incentives programs available today are fully compatible with agricultural production and allow an individual to maximize production on the most profitable acres while devoting the least profitable acres to practices beneficial to bobwhite quail or other wildlife species.

What are their properties like?

Forty-nine percent of the Landowner Assistance Program survey participants own 125 acres or less. Surprisingly, 45 percent of the individuals responding claimed to own between 126 acres and 1,000 acres. The census of Agriculture in 2002 stated the average farm size for Missouri farm operators was 280 acres.

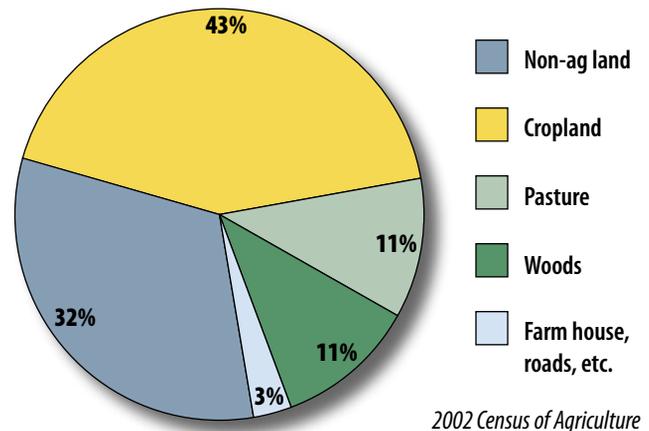
What we learned

One goal of MDC's overall private land assistance efforts is to help landowners effectively use the state, fed-



Owners of rural land not used for farming were the largest percentage of respondents to the survey.

Missouri Land Use



eral and private conservation assistance programs and technical support that is available. Accordingly, survey participants were asked if they used the management practices suggested by the resource planner. Over 88 percent of the individuals responded that they had used either all, most, or some of the management practices recommended by field staff.

The development of a management plan, for some landowners, is an invaluable document that will guide their activities over the next several years. Once a landowner determines the objectives for a piece of property, a plan can help identify the critical needs and limiting factors for many wildlife species on a given tract of land. With this in mind, survey participants were asked if the management practices recommended by department staff helped meet their objectives. Over 94 percent of the landowners responding indicated that the practices had either somewhat helped or very much helped meet their objectives.

The Landowner Assistance Program Survey also asked participants to identify limiting factors that may keep them from completing various management practices. The majority of responses focused on the funding, time and manpower required to install the practices.

Funding provided by the U.S. Department of Agriculture and the 2002 Farm Bill, along with many state and non-governmental conservation and landowner incentive programs, has greatly improved landowners' ability to complete beneficial habitat management practices. Unfortunately, a 2003 Farm and Rural land ownership survey conducted by the Department indicates that 53 percent of the individuals responding were not aware of the management assistance available to private landowners. This is one

reason why we must continue to improve our communication with landowners.

Landowners short on time and manpower may want to take advantage of specially trained conservation contractors. A series of conservation contractor workshops were completed in February and March to help link contractors with landowners and individuals wanting to install conservation practices. Additional training will be provided to the contractors to reinforce the needs of many wildlife species.

The most important piece of information provided by the survey was an indication of landowner satisfaction. Survey participants were asked, “Thinking about your most recent contact with MDC, how satisfied or dissatisfied were you with the assistance you received?” To the credit of many eager landowners and dedicated Department employees across the state, nearly 90 percent of the survey respondents were either somewhat or very satisfied with the assistance they received.

The results are certainly positive and indicate that most landowners are satisfied with the assistance received. However, much work lies ahead. The Department of Conservation has a goal of providing assistance to all state landowners, not only to those individuals restoring native prairie remnants in Northern Missouri or pine savannas in the Ozarks, but to the cattle producer in west-central Missouri, the cotton farmer in the southeast part of the state, and every landowner in between.

One way of accomplishing this delivery of service is to foster partnerships with agricultural and conservation organizations and entities in the state. Partnerships have proven to be effective, and we will continue to expand in this area wherever opportunities exist. But the most important method in advancing private land stewardship is to continue to listen to all Missouri landowners.

Many individuals receiving the survey took time to write in suggestions, concerns or to mention a staff member or program area they were particularly pleased with. One of the most frequently cited concerns from landowners was the lack of follow-up assistance available after a management plan or contract has been developed. Please know that your comments—both



Seventy-eight percent of respondents said it was “very important” to manage their land for wildlife.

positive and negative—will be used to improve our delivery of services to landowners.

Landowner involvement is the critical component for the future of Missouri’s natural resources. A call to your local MDC office can be a great place to begin your quest. The Department of Conservation is just one of many agencies and conservation partners delivering assistance to landowners. Your local county Soil and Water Conservation District Office, Natural Resources Conservation Service, or Farm Service Agency offices all offer assistance. These professionals can help a landowner get going in the right direction!

We thank all of the individuals across the state that took the time to respond to the 2005 survey and look forward to working with Missouri’s landowners for years to come. ▲

Landowner Satisfaction

When asked how satisfied or dissatisfied landowners were with the assistance they received, their response was:

- 69%** Very satisfied
- 19%** Somewhat satisfied
- 5%** Neither satisfied nor dissatisfied
- 4%** Somewhat dissatisfied
- 3%** Very dissatisfied

“I Found This Plant...”

A Department botanist identifies some of Missouri's most asked-about flora. by Tim Smith



Henbit

MDC FILE

I almost knew what he would say before he spoke. The receptionist had told me she had a caller who was curious about a plant growing in the fields along the highway.

It was early April, too early for most flowering plants, but the time when a little purple-flowered mint (*Lamium amplexicaule*) paints Missouri's fallow fields purple. It was getting to be a spring ritual that this plant would trigger several phone calls from the public.

As a Conservation Department botanist, I would get several more inquiries before the purple flowers faded and gave way to other, less showy, vegetation.

Over the years, I have seen other plants catch the public's eye during a particular season, usually corresponding to the plants' flowering or fruiting periods. Sometimes the flowers or fruits present a dramatic show of color due to their sheer numbers; at other times, the individual flowers or fruits just seem so odd.

The descriptions and photos that follow highlight some of the plants that are most likely to elicit questions. Perhaps you have wondered about the identity of some of these plants as well, but haven't had the opportunity to ask. If you haven't yet spotted them on the Missouri landscape, I hope you will enjoy seeing them here.



Henbit (*Lamium amplexicaule*)

This small (up to 10 inches tall) annual plant can turn acres of fallow fields pinkish-purple in very early spring, sometimes flowering as early as February.

Henbit grows very shallow roots and does not hinder crops that will later occupy the same ground. The common name refers to the seeds being eaten by chickens.

A closely related species, dead nettle (*Lamium purpureum*), blooms at the same time and has similar flowers. Its flowers are less conspicuous, though, being



somewhat obscured by the plant's leaves. Both species are native to Europe, Asia and Africa.

Passion flower, maypops (*Passiflora incarnata*)

A perennial vine of roadsides and fencerows in the southern half of Missouri, passion vine attracts attention because of its unique flower structure and its egg-shaped fruits filled with citrus-like pulp. "Passion flower" relates to the correlation of the flower parts to aspects of the crucifixion story. "Maypops" refers to the popping sound made by the fruits when stepped on.

Flowers appear as early as June, and fruits can be found through October. The edible fruits are green, then yellowish, and they have pale-colored pulp with a somewhat sweet and acidic flavor.

Raccoon grape (*Ampelopsis cordata*)

This high-climbing, woody vine resembles grapes, but it is not a true grape and its fruits are not edible. Hardly noticeable when bearing its tiny, greenish-yellow flowers in late spring or early summer, this vine's fruiting clusters in autumn are its real attraction. The clusters of berries can exhibit several different colors at the same time, including orange, pink and turquoise, all with a silvery cast.

Too aggressive for ornamental use, the raccoon grape can proliferate when climbing and can pull down small trees with its weight.



Jack-in-the-pulpit (*Arisaema triphyllum*) and green dragon (*Arisaema dracontium*)

These related species are found in forested areas and display interesting flowering parts in the spring. Most observers recognize jack-in-the-pulpit, but green dragon is less familiar and less conspicuous, lacking the easily recognized “jack” and “pulpit.”

Individuals of both species occasionally grow to 2 1/2 feet tall, dwarfing their usual heights of around 1 foot. They produce similar fruiting structures, and it is these fruit clusters that many observers can't match to the plants. This is because the readily identified foliage



Green dragon fruit

has withered before the fruits become conspicuous against late summer or early fall vegetation. The clusters are composed of dozens of reddish-orange

berries packed tightly at the top of a stalk, somewhat resembling a stubby, brightly colored ear of corn.

Wahoo (*Euonymus atropurpureus*)

This shrub or small tree is rather nondescript, except when in flower or fruit. It grows throughout Missouri, mostly in forests along streams, but can be found in urban landscapes where some natural vegetation remains.

The purple flowers appear in delicate, stalked clusters as early as late April. Although small, they can be numerous enough to capture one's attention. Supported by long stalks, the fruits develop by September or October into four-lobed, pink capsules that split open



Wahoo

to reveal bright-red seed coverings.

The name wahoo is derived from a Dakota term for “arrow wood,” a reference to the straight branches that were used for arrow shafts.

Indian pipe (*Monotropa uniflora*) and pinesap (*Monotropa hypopithys*)

These related species are noteworthy because they lack the green pigment chlorophyll. Rather than manufacturing their food themselves, they get their nutrients from an association with a fungus in the soil that transfers carbohydrates from another plant that is photosynthetic (uses sunlight to manufacture food).

When it emerges through brown forest leaf litter, the ghostly appearance of Indian pipe makes you question whether you're looking at a plant or some type of mushroom. It is actually a flowering, seed-producing plant with white stems, leaves and flowers. The nodding flowers of late summer or early fall gave rise to the common name, but they turn skyward as they begin to produce fruits.

Pinesap flowers as early as late June. It is similar to Indian pipe, but has more than one flower per stem, is never white and ranges from yellow to salmon colored.



Jack-in-the-pulpit



Green dragon



Wahoo



Indian pipe

False hellebore (*Veratrum woodii*)

A perennial of moist forests in the eastern two-thirds of Missouri, except for the southeastern lowlands, false hellebore is conspicuous in the spring for its large clusters of pleated leaves. Individual leaves can reach 1 foot or more in length. There are usually several plants growing in close proximity on lower portions of east- or north-facing slopes or bluffs.

Flowering plants produce a stem that grows from 2 feet to more than 4 feet tall, its upper portion branched and bearing small purple flowers. In most years, however, few if any plants will flower at a site. The plant contains poisons and is avoided by most grazing animals due to its sharp, burning taste.

Spider lily (*Hymenocallis caroliniana*)

This striking perennial wildflower is geographically restricted in Missouri to the southeastern lowlands, where it grows in low swampy areas and bottomland forests. The large, fragrant white flowers appear in clusters of three to seven in July or August.

The flowers are supported by a leafless stem about 2 feet tall, above a cluster of strap-like leaves up to 2 feet long. The spider lily is sometimes cultivated as an ornamental but may not flower consistently further north than southern Missouri.

Devil's claw or unicorn plant (*Proboscidea louisianica*)

Devil's claw is a plant of waste areas, railroads, pastures, sandy ground and gravel bars along streams. It is native to Missouri but is uncommon and scattered in



Spider lily

GINNY WALLACE

central and southern regions.

The showy flowers, sticky surfaces and rank odor make this an interesting species. However, the fruits are the real attention-getter, unlike any other found in our flora. The young fruits can be pickled for consumption, but older fruits become woody and definitely inedible. They persist for many months and may be found long after the annual plant has withered and disintegrated. The long beak on the fruit splits at maturity into two halves that curl into the 6-inch-long "devil's claws."



NOPPADOL PAOTHONG

Devil's claw seed pod



Pinesap

RICK THOM



False hellebore

MDC FILE



False hellebore

GINNY WALLACE



Devil's claw

GEORGEYATSKIEWYCH

Deciduous holly or possum haw (*Ilex decidua*)

The bright-red fruits of deciduous holly stand out as leaves are shed in the fall and what were once thickets of foliage become the grays and browns of woody plant barks. Deciduous holly is the more common of two native Missouri hollies that lose their leaves each fall. It is a shrub or small tree, often with arching branches with numerous stubby projections called spur branches. With the leaves off, the numerous red berries of deciduous holly catch the eye and lead observers to question its identity.

Deciduous holly can be found in a variety of wet or dry habitats throughout the Ozarks and the southeastern lowlands, but it is absent from much of northern Missouri. As with other hollies, only female trees produce berries. The berries persist throughout most of the winter, their bright-red color eventually turning to brown. They seem to be ignored by wildlife for months but eventually are consumed as either their taste improves or other wild fruits become scarcer.

Dodder, lovevine (*Cuscuta*)

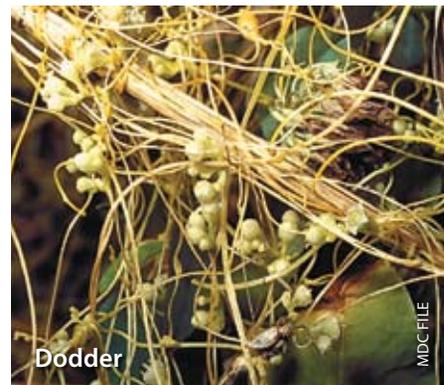
Dodder has been described as looking like a batch of orange spaghetti that someone threw onto other vegetation. Without leaves, chlorophyll or roots, it is understandable why observers might question whether dodder is a plant at all.

There are ten species of dodder that occur in Missouri, and all are related to our familiar morning glories. All are parasitic, deriving their water and food



from the plants to which they become attached. Their stems can twine tightly around another plant or sprawl in masses on top of other vegetation.

In summer or fall, the small white flowers make dodder more readily identifiable as a plant, and it is primarily the flower characteristics that allow botanists to identify the species. In southern climates, dodder can be an agricultural pest by infesting crop fields, decreasing yields and fouling harvesting machinery. In Missouri, it is usually just a curiosity. ▲



Note: Latin, or scientific, names are given along with common names to more accurately specify these plants. The Latin names are the key to obtaining more information about the species. Internet searches on the Latin names will provide additional photos and descriptions. All of the plants listed in this article are native to Missouri except for the henbit and dead nettle.



CPR for Fish!

Successful catch-and-release fishing requires special handling.

by Kevin Richards, photos by Cliff White

Catch-and-release makes good sense. It provides more fish for more anglers to catch more often. But, catch-and-release itself has a “catch.” If people don’t handle fish properly, the fish won’t survive after being released.

That’s why fish managers, including this old fisheries biologist, like to think about CPR for fish. CPR doesn’t mean giving the fish mouth-to-mouth resuscitation—imagine that! Instead, it stands for Catch, Pamper and Release. Pampering, or taking good care of the catch before releasing it, helps ensure its survival.

CPR is necessary for both voluntary catch-and-release and for when regulations require anglers to release fish they catch.

Voluntary catch-and-release is more common than you might think. It's a modern philosophy that's evolved as fishing has become more of a sport and less of a means of putting food on the family table.

Sport anglers enjoy the process of finding, fooling and catching fish. To increase the prospects for future enjoyment, they release their fish to, as they often say, "fight another day."

Surveys show that many anglers who target bass, trout and muskie release most of the fish they catch. They might keep the trophy of a lifetime, but they are just as likely to snap a photo of it and return it to the water.



When handling fish, avoid placing your fingers in their gills. Land bass by grasping the fish's lower lip with your thumb and forefinger. Don't cock your wrist, which can put severe pressure on the bass's jaw.

Many anglers are even releasing catfish and crappie, typically thought of as food fish. It's the fun and satisfaction of successful fishing they seek, not the flesh of the fish.

Tournament fishing has done much to spread the catch-and-release philosophy. Tournaments that end in a fish-fry have become exceedingly rare.

Almost all bass and walleye tournaments require anglers to keep fish alive so they can be released. They even deduct points if a fish is dead or near death at the weigh-in. This requirement has led to innovations in livewell design and tournament weigh-in procedures that better protect fish until they can be released.

Fishing regulations often require catch-and-release. Some areas that receive a lot of fishing pressure or that are being managed to protect or rebuild fish populations have areas or seasons in which only catch-and-release fishing is allowed.

Fish shorter than the legal length limit also have to be released immediately after being caught. It's important for anglers not to disregard undersized fish as "shrimps," but to treat them as fish that have not yet reached the legal limit. They may someday grow to be trophies. Their chances of growing larger are reduced, however, unless they are provided CPR.

The procedure for effective catch-and-release is similar for most species.

Avoid Stress

What usually kills or fatally injures fish is the combination of stress they experience during capture, hook removal and handling. Temperature, the amount of oxygen available and the length of time between catch and release also come into play.

Anglers should strive to minimize stress on fish during capture by landing them quickly, before they exhaust themselves with fighting. A fish that comes in completely worn out has less chance for survival. That's why it's important to match your tackle size and line strength to the species you are targeting. It's a fact that you can land large fish on ultra-light lines, but the lunkers will have lower survival rates after being released.

The best method for releasing fish is one that you are familiar with and have practiced. You can use a landing net or you can grab the fish's lip between your thumb and forefinger. If you know you're not going to keep the fish, it might be better to free the hook with needle-nose pliers or forceps while the fish is still in the water.

When handling fish, keep fingers away from the gills and eye sockets.



It's OK to snap a picture of a fish before releasing it, just be careful not to drop the fish on the floor of a boat or on the ground. When measuring a fish, wet your hands and the measuring board prior to laying the fish on it and don't let fish come into contact with any dry surfaces. You want to avoid disturbing the slime or mucous covering on the fish's body that protects the fish from infection.

The best way to pamper a fish that you're not going to keep is to reduce the length of time between catching and releasing it.



Keep fish wet to avoid damaging their slime covering and release them gently. If the fish seems exhausted from fighting, hold it upright by the tail and move it backward and forward very slowly until it swims off on its own.

Remove hooks carefully so that you don't injure the fish's gills or internal organs. If the fish has swallowed the hook or the hook is deeply embedded, cut the line rather than trying to force the hook out.

In some cases, you can use wire-cutters or the cutting portion of needle-nose pliers to cut the barb from the hook, allowing easy removal. It's easy to replace the hook with another. Often, anglers who expect to release fish flatten the barbs of their hooks. The hooks don't pull out as long as line is kept taut, but they slip out easily when it comes time to release the fish.

If a legal-size fish is deeply hooked or there is excessive bleeding, consider keeping the fish and making a good meal of it.

Never stringer a fish that you plan to release. Stringers damage a fish's gills.

When you release a fish do it carefully. Don't just toss it. It might be stunned by the impact with the water, or it could land on rocks or sticks.

When releasing an exhausted fish, hold it upright by its tail and move the fish very slowly forward and back until it recovers enough to swim away on its own.

Water temperature dramatically affects the survival rate of released fish. In spring and fall, when water temperatures are less than 80 degrees, properly handled bass often have survival rates over 90 percent, if immediately released, or even under delayed-release situations, such as bass tournaments.

However, as water temperatures climb above 80 degrees the chances of bass survival decrease sharply. Missouri Department of Conservation fisheries biologists cooperated with Mississippi State University to

assess survival of bass that were caught, weighed in and released by anglers during summer tournaments. Release survival was less than 50 percent, even when anglers did all they could to pamper the bass.

The high mortality rate seems to be due to the combined effects of handling, confinement and high water temperatures, and the presence of largemouth bass virus. Warm water in livewells provides an environment under which this and other fish pathogens can thrive and rapidly infect healthy fish. Nearly all of Missouri's large lakes have tested positive for largemouth bass virus.

Water temperature is also a key factor in catch-and-release survival of cool- and cold-water fish such as trout, muskies or walleye. Walleye studies have shown that release survival rates decrease at temperatures above 70 degrees.

During warm-water periods, all tournament organizers should consider alternatives to the standard weigh-in format. Several muskie tournaments in Missouri have combined digital photography and on-the-water witnesses to verify catches so fish can be released immediately.

Fish also require oxygen, which they get from the water. A fish out of water is like a person with his or her head underwater.

Try holding your breath while you are unhooking, photographing or transporting a fish, and you'll understand the oxygen deprivation a fish might be experiencing. Make every effort to release fish quickly. Keep the camera ready so you can take pictures quickly.

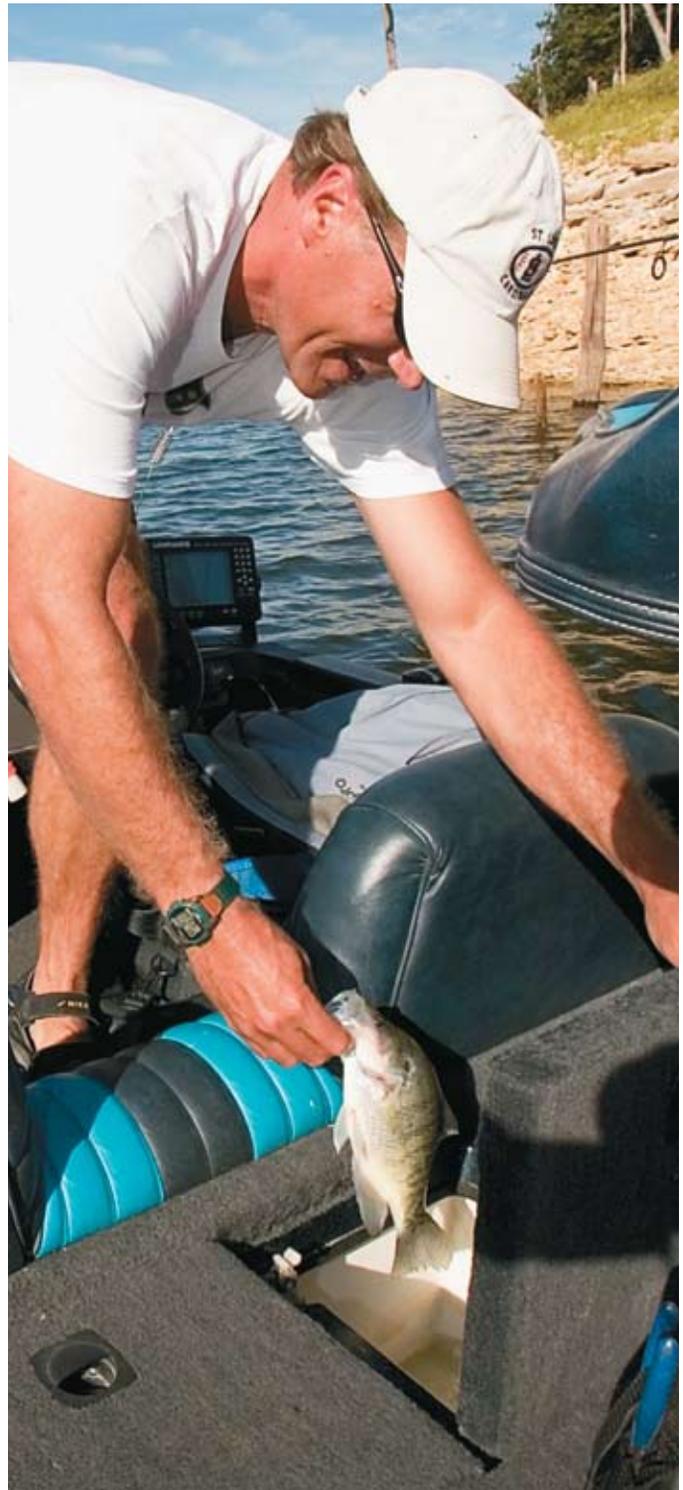
Fish kept in overcrowded or poorly aerated livewells also suffer from oxygen deprivation.

A constant flow of fresh, cool, aerated water through the livewell will help maintain a healthy environment for the fish. Because cooler water holds more oxygen, and fish in cooler water consume less oxygen, some anglers and researchers recommend adding ice to the livewell. However, it is important not to cool the livewell water more than 10 degrees below the surface temperature of the lake to avoid creating a temperature shock for the fish.

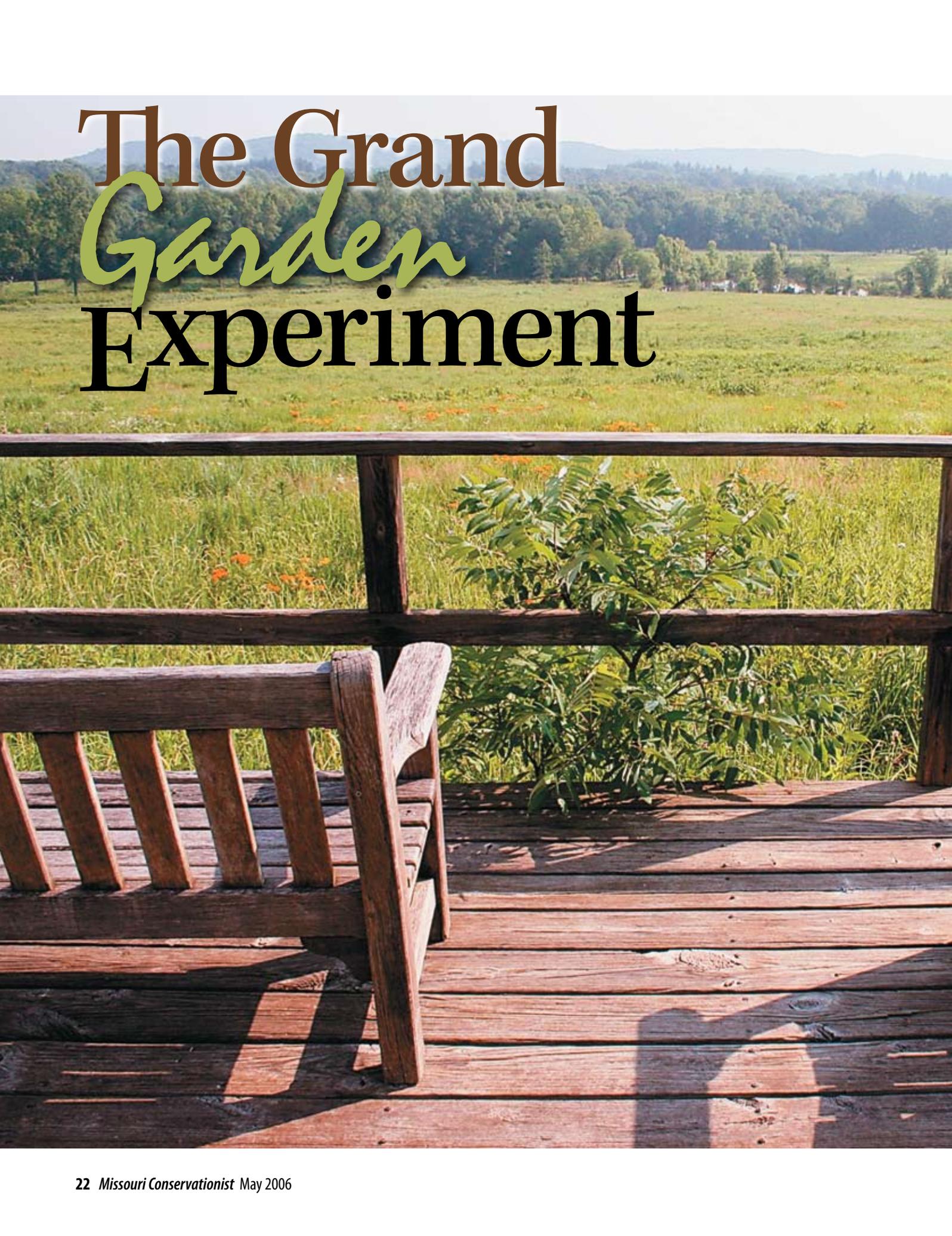
A livewell additive that can reduce stress is common, uniodized table salt. Add one-third of a cup of salt per 5 gallons of water in the livewell. This is similar to the concentrations used in many hatchery transport vehicles.

The best way to pamper a fish that you're not going to keep is to reduce the length of time between catching and releasing it. Any confinement, whether the fish are held in a livewell, a weigh-in bag or a pickle bucket, can reduce survival rates, especially when the water is warm.

Immediate release gives fish the best chance to live. Whether you are required by law to practice catch-and-release, or do so voluntarily, do all you can to increase the chances of survival for that fish. Practice CPR. ▲



A constant flow of fresh, cool, aerated water through the livewell helps maintain a healthy environment for fish you plan to release.

A scenic landscape photograph showing a vast green field with scattered orange flowers. In the foreground, a wooden deck with a railing and a wooden bench is visible. The background features rolling green hills and distant mountains under a clear sky. The text 'The Grand Garden Experiment' is overlaid on the top left of the image.

The Grand *Garden* Experiment



Today's Shaw Nature Reserve is the exciting result of 80 years of conservation management.

by Holly Berthold

Nestled in the foothills west of St. Louis lies a multifaceted jewel. Shaw Nature Reserve, maintained by the Missouri Botanical Garden since 1925, comprises 2,400 acres of prairie, oak-hickory woods, floodplain, riparian forests, dolomite glades, woodlands, savannas and marsh wetlands.

The early 1900s were years of great advances in industry for the city of St. Louis, yet the resulting coal smoke and other pollution caused area plant species to suffer. In response, Shaw Nature Reserve (known as Shaw Arboretum until its 75th anniversary in 2000) was established.

The Civilian Conservation Corps became involved in the mid-1930s and cleared miles of trails throughout the reserve. Trees were planted, orchards and pastures were cultivated, and the land was farmed, all in an attempt to study self-reliance and solid land-use practices. Natural forests and wildflowers were allowed to regenerate in noncultivated areas of the reserve.

Shaw Nature Reserve is an experiment that has gained momentum for the past 80 years. Land-use practices such as controlled burning and watershed control evolved alongside environmental awareness and educational outreach. The thread that ties these diverse practices together is the study of human land use.

"You can't take the human element out of the natural ecosystem," says John Behrer, director of Shaw Nature Reserve. "Humans have been manipulating Missouri's landscape for the last 12,000 to 15,000 years." He explains that the diverse natural communities in Missouri adapted over thousands of years with direct human interaction.

"If our goal is to maintain a high level of biological diversity on Missouri's natural areas, human interaction and management must continue," says Behrer. "Fire management, control of invasive exotics, and selective forest management practices are all examples of the ongoing interactions that are needed."

Management is vital to the success of the reserve's restored prairies, woodlands, glades and wetlands; however, public access is vital to the success of the reserve itself. It is the connection visitors make to these ecosystems that impacts thousands of lives each year and keeps this experiment current and exciting.

COURTESY OF SHAW NATURE RESERVE



Bascom House

On any given day, school children, bird watchers, wildflower enthusiasts, artists and families may gather at the reserve. They are all seeking the same thing: a pristine environment in which to connect with nature. Shaw Nature Reserve has the resources and attractions to fulfill that desire.

“The Whitmire Wildflower Garden is a great place for people to see native landscaping in action.”

The Bascom House

The Bascom House opened to the public in the spring of 1996. Restoration work on the Italianate-Victorian home incorporates recycled newspapers for insulation and a highly efficient geothermal heating and cooling system. Hardware was forged from recycled metals, the lumber was salvaged, and wood finishes were created from ground earth and stale beer.

While the upstairs houses Shaw Nature Reserve’s staff offices, the downstairs offers a glimpse into the past from eight different characters’ perspectives. The “People on the Land” exhibit is a joint project between the Missouri Department of Conservation and the Missouri Botanical Garden and gives an account of human interactions with the land in the lower Meramec Valley over the past 12,000 years. Visitors can experience testimonials from an Osage Indian woman, a sharecropper, and the original owner of the Bascom House, Confederate Colonel Thomas Crews, among others.

The Whitmire Wildflower Garden

A network of paths near the Bascom House leads visitors through the Whitmire Wildflower Garden. This 5-acre tract includes more than 400 species of native plants from a variety of Missouri habitats. The garden is an inspiration to the thousands of visitors who learn about native gardening techniques for their own backyards.

“The Whitmire Wildflower Garden is a great place for people to see native landscaping in action,” says Scott Woodbury, the reserve’s chief horticulturist. “We have demonstration prairies, wetlands and woodlands for those with larger landscapes. For the smaller home gardener, we have a native shrub and vine planting, a native perennial garden, a rock garden, Osage Indian garden, shade garden, and a rain garden.”

Shaw Nature Reserve offers a native landscaping program throughout the year called Native Plant School, which is held monthly at the garden. Class schedules can be found at www.shawnature.org or in the Missouri Botanical Garden’s course catalog, which can be requested by calling 314/577-9441.



Whitmire Wildflower Garden



COURTESY OF SHAW NATURE RESERVE

Both gardeners and strollers can find inspiration among 5 acres of native wildflowers and 200 acres of restored prairie.

Tours and Trails

One of the best activities at the nature reserve doesn't require scheduling or equipment and can take from 10 minutes to an entire afternoon, depending on your interests. There are 14 miles of self-guided tours and hiking trails, and each one offers a unique setting.

Trails vary in length from three-quarters of a mile to 2 ½ miles. Whether you're interested in an early morning jog by the Pinetum—a collection of pine, spruce, fir and cedar that boasts thousands of daffodils each spring—or just want to take a gentle stroll to the Bluff Overlook Trail, the Shaw Nature Reserve offers one of the best collections of hiking trails in the state.

Of special note is the Prairie Trail, with its spectacular views from an observation deck high above the reserve's 200 acres of restored prairie. Springtime blooms include shooting star and cream wild indigo, and the entire prairie undulates with waves of

There are 14 miles of self-guided tours and hiking trails, and each one offers a unique setting.

purple, pale green and pink as far as the eye can see. Dragonflies, migrating monarchs and many different species of birds soar past plantings of purple echinacea, prairie grass and goldenrod in the late summer and early fall. Each season crafts a new quilt of color.

Families will be delighted with the Wilderness Wagon, which offers guided tours on weekends in May and June from the Visitor Center. This 45-minute, narrated tour of the Shaw Nature Reserve rolls visitors past wetlands, shortleaf pine forest, tallgrass prairie and Pinetum Lake aboard an open-air wagon.

Dana Brown Overnight Education Center

Teachers of grades 4-12, corporate training professionals, conservation organizations and other groups enjoy accommodations and classes offered at the Dana Brown Overnight Education Center, on-site at the reserve. Four historic log cabins surround the large Assembly Building, which is used for training and meeting space. The buildings, which date back to around 1850, have been dismantled from sites within 100 miles of St. Louis and reconstructed with salvaged materials, much like the restoration approach used at the Bascom House. They feature modern amenities and are handicapped-accessible.

Shaw Nature Reserve staff work in tandem with teachers to create an inquiry- and standards-based learning approach. Math and science curriculums weave traditional classroom learning with field investigation. Courses cover orienteering,



Lacking trees or rocks on the prairie, pioneers used sod bricks to build their homes. The Reserve's Sod House was completed in 2004.

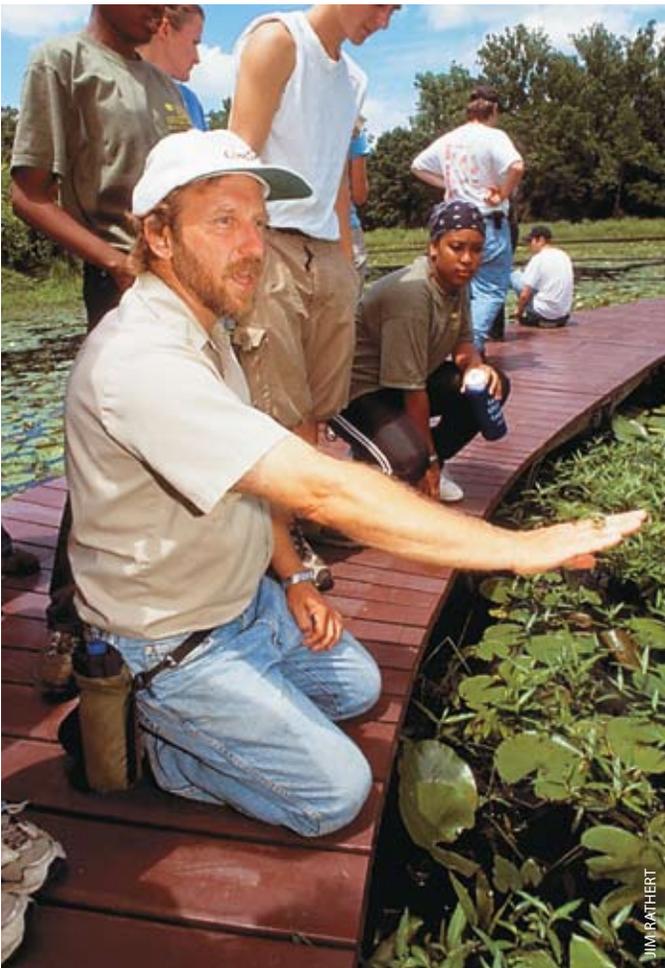
river ecology, nocturnal hiking, botany, environmental issues and other topics.

“Students and adults staying at the Overnight Center have the opportunity to fully immerse themselves in the natural world for an extended period,” says Lydia Toth, manager of education at the nature reserve. “Nighttime activities such as night hikes and astronomy classes offer a unique experience and are very popular. Many of our students have never seen a sky full of stars before, so this opens up a whole new world for them.”

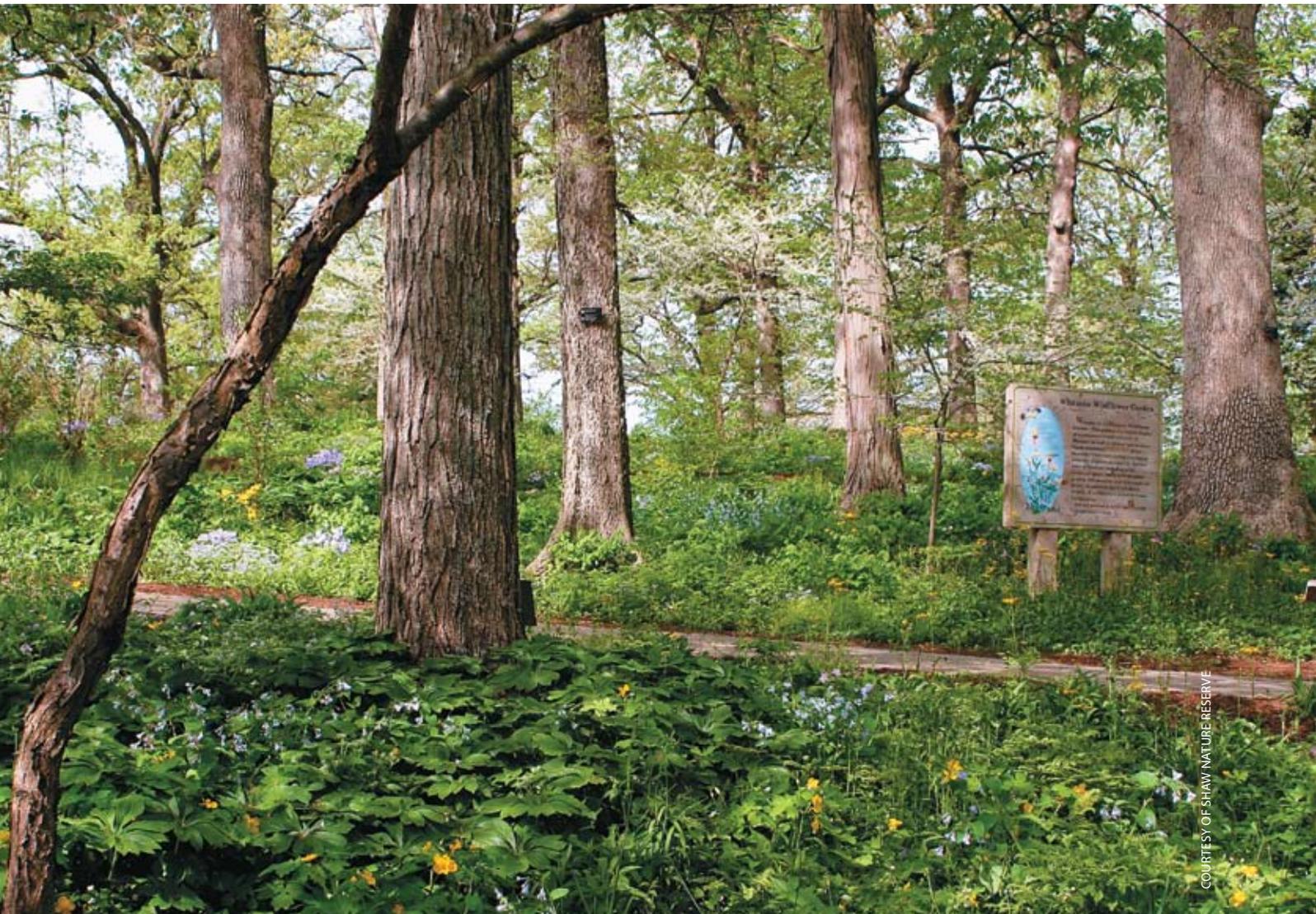
The Center is surrounded by forest, prairie and wetland ecosystems, making it a wonderful resource for outdoor programs and field investigations, or just enjoying some quiet time in nature. Reservations and information may be obtained by calling 636/451-3512, ext. 6081.

Volunteers are vital to the success of the programs, activities and operations at Shaw Nature Reserve. Volunteers assist staff with tours, education programs, special events, clerical work, greenhouse chores and much more. Without the commitment and dedication of these volunteers, Shaw Nature Reserve would not be able to offer its visitors so much access or so many experiences. Reserve volunteers work hard, but there are rewards. As volunteer Nancy Gelb says, “As a Teacher-Naturalist, I can be part of the future of the planet and maybe even make a difference in the way a child views the world.”

So whether your interest is nature photography, helping children learn about the natural world, cataloging plants or simply enjoying a cool spring morning walk, the next time you have a few hours or an afternoon free, be sure to visit Shaw Nature Reserve. ▲



Field investigations in a variety of habitats, including wetlands, augment traditional classroom learning.



There are 14 miles of self-guided tours and trails throughout the reserve, ranging in both setting and length.



Serpentine wall

The Shaw Nature Reserve Statement of Purpose is:

To inspire responsible stewardship of our environment through education, restoration and protection of natural habitats, and public enjoyment of the natural world.

Hours: The grounds are open from 7 a.m. until dark. Visitor Center hours are from 8 a.m. to 4:30 p.m. on weekdays, and 9 a.m. to 5 p.m. on weekends. Admission is \$3 for adults, \$2 for adults over 65 years, and free for members of the Missouri Botanical Garden and children under 12.

The Bascom House, Crescent Knoll Overlook, Maritz Trail House and sections of the Whitmire Wildflower Garden are wheelchair-accessible.

Shaw Nature Reserve is located 35 miles west of St. Louis at the intersection of Interstate 44 and Highway 100, at Exit 253. Go to www.shawnature.org, or call 636/451-3512 for more information.



Pickerel weed

Habitat Hint: Water for wildlife

A water garden can draw animals that hop, fly and creep into your landscape. Native plants enhance the attractiveness of water gardens to wildlife.

Pickerel weed (*Pontederia cordata*), with its tall, purple flower spikes and arrow-shaped leaves, is a good nectar source for butterflies and other insects. It roots easily and blooms from June through October.

Cardinal flower (*Lobelia cardinalis*) thrives in water gardens and is a magnet for cloudless sulfur butterflies and hummingbirds when it blooms in August and September.

Another native must-have for water garden areas is marsh milkweed (*Asclepias incarnata*). Not only does it provide nectar for all kinds of butterflies, it supplies food for larval monarchs.

Buttonbush (*Cephalanthus occidentalis*) is an excellent addition to large water gardens with marshy edges. Hummingbirds, butterflies and other insects are drawn to its white, nectar-filled blossoms that resemble starbursts. It blooms in May and creates thickets that provide shelter for birds and small mammals.

Another good addition to a marshy edge is Emory's sedge (*Carex emoryi*), it has grass-like leaves that bend and flow with the wind. It spreads rapidly, so it is useful where erosion may be a problem.

Combining native plants with water features creates a complete habitat that is a wildlife haven. For a guide with suggestions for creating a wildlife water garden, contact Barbara Fairchild, barbara.fairchild@mdc.mo.gov and ask for "Natives for Your Home", or send your request to Grow Native, P.O. Box 180, Jefferson City, MO 65102-0180. To learn more about Missouri's native plants, visit www.grownative.org. —Barbara Fairchild

Lisa Allen is new state forester

Howell County native Lisa Allen assumed duties in March as Missouri State Forester and Forestry Division Chief. In announcing her appointment, Conservation Department Director John Hoskins noted Allen's passion for forest stewardship and her vision for the future of forest management in Missouri.

Allen has worked for the Conservation Department for 20 years, serving in jobs ranging from assistant resource forester to Private Land Services Division Chief. She said her goal is to use partnerships to advance healthy, diverse and sustainable forests in both rural and urban areas.

She also said the Forestry Division faces several challenges, including:

- Managing uncontrolled fire, disease and insects.
- Land conversions that result in smaller, fragmented forests.
- Informing and educating Missourians about the benefits and importance of forests in maintaining healthy ecosystems that enhance quality of life.
- Maintaining a quality work force in the Forestry Division during a period when there is a shortage of professional foresters.
- Maintaining healthy and sustainable forests on private land, which contains 82 percent of the state's forests, as well as on public land. These forests support a wood-products industry that annually generates \$4.4 billion in economic activity, creates \$54 million in state sales tax revenue and supports approximately 32,250 jobs.

Allen is the eighth person and the first woman to hold the title of Missouri State Forester.



Lisa Allen



WOW in St. Louis

It's a great time to be outdoors, so step into Mother Nature's classroom for a great outdoor adventure! Join us on Saturday, June 10, at Forest Park in St. Louis from 8:30 a.m. to 4 p.m. for the Wonders of the Outdoor World (WOW) St. Louis Outdoor Event.

Participants will master new outdoor skills or improve existing ones. An optional overnight camp will be offered on Friday, June 9, that will feature storytelling by Bobby Norfolk, stargazing and a camp out—right in Forest Park! The WOW event features hands-on classes in a variety of outdoor skills, including fishing, camping, archery, orienteering and canoeing. It also features a climbing wall. A fee of \$10 covers meals, equipment and course instruction. Space is limited! To register, call 314/340-5794.

POWDER VALLEY'S MAY NATURE PROGRAMS

St. Louis area residents can enjoy nature programs from Lewis and Clark to logging lore at Powder Valley Conservation Nature Center (CNC) this month. At 7 p.m. May 5, visitors will be treated to a description of the adventures of the Corps of Discovery by a living historian portraying Corps member George Droulliard. At 10 a.m. May 6, join an Ozark laborer for a description of earning a living chopping railroad ties for a dime each in the late 1900s. At 7 p.m. May 12 join Wild Heart, formerly Critter Rock, for a musical romp through the outdoors. At 7 p.m. May 19, join living historian Willie Lyles for a visit with York, Capt. William Clark's "manservant." Discover how the Corps of Discovery's only African-American member made history and helped ensure the expedition's ultimate success. Powder Valley CNC is at 11715 Cragwold Road in Kirkwood. Reservations are required for all programs. For further information about these and other upcoming offerings, call 314/301-1500.

Native plant field day set for June 23

The MU Bradford Research and Extension Center near Columbia, Mo., will host its second Native Plant Field Day from 9 a.m. to noon on June 23. Participants will learn about uses of native plants for landscaping and backyard wildlife. Other topics will include rain gardens, native plants for wildlife management, restoration of natural plant communities, and the use of native plants in agriculture. The day will include indoor and outdoor demonstrations, booths and tours. The event is free and open to all. Additional information is available at www.aes.missouri.edu/bradford/bfdir.stm, or from Thresa Chism or Tim Reinbott, 573/884-7945 or Nadia Navarrete-Tindall, NavarreteN@missouri.edu.

May's stringerful of fishing events

Spring is the season for anglers, as demonstrated by a full calendar of events.

The International Federation of Black Bass Anglers' National Crappie Buddy Tournament is May 13 at the Runaway 2 Resort, Lake of the Ozarks. Boat and bank anglers compete in separate divisions. Exciting activities are provided for youths. For more information, visit www.ifbba.org, and click on "Crappie Tournament."

The Lost Creek Bass Club's Take a Kid Fishing Tournament is May 13 at the Port of Kimberling Marina, Table Rock Lake. This benefit for the Make-A-Wish Foundation features payouts for big bass and the largest other species caught by a youth angler, and a drawing for a 2006 Harley-Davidson Buell Blast. For details, call 417/887-1640 or 417/634-3969.

Kids' Fishing Day events at Missouri's four trout parks each have their own flavor, with free food, fishing equipment giveaways, fishing contests, attendance prizes, demonstrations and displays all day long. The fun starts May 13 at Bennett Spring State Park near Lebanon. Call 417/532-4418 for details on this event. The other three events are on May 20. Call 573/548-2585 for information about Montauk State Park's celebration, 417/847-2430 for Roaring River State Park's event information, and 573/265-7801 for details of the event at Maramec Spring Park.

Shepherd of the Hills Hatchery will host a family fishing fair from 10 a.m. until 2 p.m. June 10. Visitors can learn how to choose baits, cast, and clean and cook fish. The Fishin' Magicians comedy team will perform, and other activities and crafts will provide fun for all ages. No reservations are needed for this free event. The hatchery is 5 miles south of Branson on Highway 165 next to Table Rock Dam. Call 417/334-4865, ext. 0, for details.





Bobwhite quail

Habitat Hint: Helping bobwhite quail raise families

Bobwhite quail are nesting this month. If you want to encourage them, put off mowing or haying until mid-July. Here are some other things you can do to help ensure the future of bobwhites on your land.

- Clip weeds in newly planted fields of warm-season grasses to a height of 4 to 6 inches.
- Use herbicides to set back established stands of warm-season grasses, making fields more accessible and productive for quail.
- Plant shrub lespedeza seed at a rate of 8 pounds per acre for summer food and cover.
- Plant food plots of milo and corn for winter food and cover.

For help managing your land for quail and other grassland wildlife, request a free copy of "On the Edge: A Guide to Managing Land for Bobwhite Quail" by writing to Missouri Conservation Department, "On the Edge: A Guide to Managing Land for Bobwhite Quail," P.O. Box 180, Jefferson City, MO 65102-0180 or e-mail pubstaff@mdc.mo.gov. For help implementing the advice in the booklet, contact the Conservation Department office nearest you and ask to speak with a private land conservationist. See page 1 for a listing of regional office phone numbers.

Quail Unlimited to hold national convention in Kansas City

"Flight to the Future" is the theme of Quail Unlimited's national conference, which will be held in Kansas City July 26–30. The event, which draws hundreds of citizen quail conservationists from around the nation, will be headquartered in the Westin Crown Center.

The event will kick off July 26 with a tour of quail habitat partnerships with the Conservation Department and private landowners. Participants also will get a comprehensive overview of quail biology, habitat and management.

The convention gets in full swing July 28 with three full days of activities, including the State of the Quail Address, conservation seminars, prescribed fire and herbicide workshops and sessions on youth education, improving QU chapter success and many other topics. Those who attend the July 29 luncheon can bid in a live auction for shotguns, hunting clothing and other quail-hunting gear.

The convention runs concurrently with the Heartland Wildlife Expo, which will bring more than 200 outdoor vendors and exhibitors to the Crown Center Exhibit Hall. Included is the King of Bucks collection, the Warrior race car, dog-training seminars, hands-on kids activities, wildlife biologists who will develop custom management plans for landowners, and a drawing for a free all-terrain vehicle.

For more information, call 803/637-5731, or visit www.qu.org.

Keep a lookout for Missouri's Most Unwanted—the zebra mussel

Missouri boaters, anglers and other water enthusiasts need to be on the lookout to prevent this aquatic nuisance species from spreading to our lakes and streams. This Caspian Sea native has hitchhiked to many areas of the country, including the Mississippi and Missouri rivers, causing economic, ecologic and human health impacts along the way.

Overland transport on boats, motors, trailers and aquatic plants is one way zebra mussels spread. Adult zebra mussels can live for several days out of water, and their microscopic larvae can survive in boat bilge water, livewells, engine cooling water systems and bait buckets.



Zebra Mussels

To help prevent the spread of zebra mussels:

- Inspect your boat and trailer thoroughly, and remove any trash, mussels or aquatic weeds before leaving any water body.
- Drain water from the motor,

livewell, bilge and transom wells, and any other water from your boat and equipment before leaving any water body.

- Dump leftover bait on land, away from the water.
- Rinse your boat, trailer and equipment (including livewells, bilge, and cooling systems) thoroughly with hard spray from a garden hose, and allow to dry for at least 48 hours. If your boat or equipment was used in zebra mussel-infested waters, use HOT (104 degrees) water, like that found at a do-it-yourself carwash.
- Dry your boat, motor, trailer and equipment thoroughly in the hot sun before using it again.

Zebra mussel adults have a distinct triangular-shaped shell, with a variable striped pattern, and can grow to a size of about 2 inches. Most are fingernail-sized.

To report a potential zebra mussel sighting or for more information, contact your nearest Missouri Conservation Department office (see page 1 for a listing of regional office phone numbers), or go to www.missouriconservation.org/nathis/exotic/zebra/.



Missouri River

River management symposium

A Missouri River management meeting May 9–12 will bring together people from several states with the theme “Collaborating in the Current.”

The event combines the 10th Annual Missouri River Natural Resources Conference and the Eighth Biennial River Management Society Symposium in South Sioux City, Neb. Participants will include representatives of wildlife agencies from seven Missouri River states, including Missouri, with river management professionals from seven states and Canada. The goal of both groups is to share information and build partnerships in river management. Topics to be discussed include endangered species, invasive species, recreational use economics, hydropower licensing, water quality and American Indian water rights. Visit www.river-management.org for more information.

CONSERVATIONIST OF THE YEAR

Ron Coleman of Wildwood is the Conservation Federation of Missouri’s 2005 Conservationist of the Year. The award recognizes Coleman’s 30 years of work in such diverse areas as developing hiking and biking trails, organizing a wildlife art festival, stream restoration, urban parks, state parks, greenways and political activism to ensure the future of Missouri’s sales tax for parks and soils.



From Left: Summer Thomas, Ron Coleman and Don Johnson

In addition to the overall conservationist award, the Conservation Federation annually recognizes the contributions of individuals and organizations in specific types of conservation. This year’s honorees included:

- Professional Conservationist of the Year Jennifer Battson
- Youth Conservationists of the Year Dane Balsman and Patrick “Neal” Hutton
- Conservation Communicator of the Year Steve Brigman
- Conservation Educator of the Year John “Jack” Bowles
- Hunter Education Instructor of the Year William “Jake” Jacoby
- Wildlife Conservationist of the Year Nick Prough
- Water Conservationist of the Year honors went to The Watershed Committee of the Ozarks
- Conservation Organization of the Year went to The Ozarks Wilderness Waterways Club

To learn more about the Federation and the Conservationist of the Year awards, visit www.confedmo.org or call 573/634-2322.

Nominate Citizen Conservationists by June 15

Do you know someone who has made outstanding contributions to conservation in Missouri? Why not nominate them for the two highest honors bestowed by the Missouri Conservation Commission the Master Conservationist Award or the Missouri Conservation Hall of Fame? The Master Conservationist Award honors living or deceased citizens while the Missouri Conservation Hall of Fame recognized deceased individuals. Those who can be considered for either honor are:

- Citizens who perform outstanding acts or whose dedicated service over an extended time produces major progress in fisheries, forestry or wildlife conservation in Missouri.
- Employees of conservation-related agencies who perform outstanding acts or whose dedicated service over an extended time produces major progress in fisheries, forestry or wildlife conservation in Missouri.

In addition the Master Conservationist Award can also be conveyed upon:

- Former Conservation Commissioners who provided outstanding leadership as commissioners and perform outstanding acts as citizens in the conservation of fisheries, forestry or wildlife.

Anyone can submit a nomination, which should include a statement describing the nominee’s accomplishments and a brief biography. Please submit nominations by June 15th to Janet Bartok, Missouri Department of Conservation, P.O. Box 180, Jefferson City, Mo. 65102 or email Janet.Bartok@mdc.mo.gov

A screening committee appointed by the Conservation Department’s director meets semi-annually to consider nominees with the Conservation Commission conveying final approval.

Missouri’s Outdoor Women

Fresh air, sparkling water and the company of other women who enjoy the outdoors will make the Missouri’s Outdoor Women gathering June 9–11 a weekend to remember. The event is a chance for women to learn or hone outdoor skills with the help of expert instructors.

The event will be held at the Windermere Conference Center, a state-of-the-art facility on 1,300 acres at Lake of the Ozarks. Workshop offerings will include fly-fishing and fly tying, basic fishing, an all-day canoe trip, Dutch oven cooking, watercraft operation and archery, handgun, rifle and shotgun shooting.

The early registration deadline is May 1. Late registrations will be accepted until June 2. For more information, contact Regina Knauer, Regina.Knauer@mdc.mo.gov, 417/895-6880 or 573/751-4115, or Jackie Keller, Jackie.Keller@mdc.mo.gov, 573/751-4115, ext. 3292.



Outdoor Calendar

Hunting

	open	close
Coyotes	5/15/06	3/31/07
Deer, Firearms	11/11/06	to be announced
Groundhog	5/15/06	12/15/06
Rabbits	10/1/06	2/15/07
Squirrels	5/27/06	2/15/07
Turkey		
Spring	4/24/06	5/14/06

Fishing

Black Bass (certain Ozark streams, see the wildlife code)	5/27/06	2/28/07
impoundments and other streams year round		
Bullfrog	sunset	midnight
	6/30/06	10/31/06
Nongame fish snagging	3/15/06	5/15/06
Paddlefish on the Mississippi River	3/15/06	5/15/06
Trout Parks	3/1/06	10/31/06

For complete information about seasons, limits, methods and restrictions, consult the *Wildlife Code* and the current summaries of "Missouri Hunting and Trapping Regulations" and "Missouri Fishing Regulations," the "Fall Deer and Turkey Hunting Regulations and Information," the "Waterfowl Hunting Digest" and the "Migratory Bird Hunting Digest." This information is on our Web site at www.MissouriConservation.org/regs/ and at permit vendors.

The Conservation Department's computerized point-of-sale system allows you to purchase or replace your permits through local vendors or by phone. The toll-free number is 800/392-4115. Allow 10 days for delivery of telephone purchases. To purchase permits online go to www.wildlife.license.com/mo/.



Hunting gear led gains among sporting goods sales

Sales of hunting-related equipment experienced a whopping 8 percent jump in 2005, leading all other categories, according to the National Sporting Goods Association. The trade group's report "The Sporting Goods Market for 2005" estimates sales of hunting-related gear at \$2.8 billion. The next-largest gain was in tennis-related equipment, which ticked up 5 percent. Archery equipment sales came in third with a 4 percent increase. Firearms sales increased 9.5 percent in 2005. Rifles led the way with an increase of 16.5 percent. Attendance at the Shooting, Hunting, Outdoor Trade (SHOT) Show in Las Vegas in February topped 37,000.

AGENT NOTEBOOK

With summer just around the corner,

I can feel the excitement in the air. School is just about out for summer break, and my fishing poles are ready for a workout.

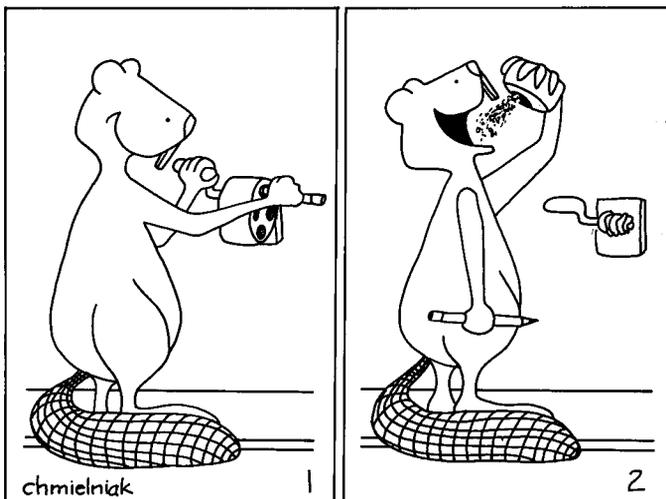
I can remember just how excited I used to get as summer neared. Fishing was all I could think about. My friends and I spent hour after hour at our neighbor's pond catching bluegill and bass.

Fishing is not just a sport for me; it is a life-changing event. It gives me the opportunity to relax and contemplate many of life's challenges. It allows me to collect my thoughts and gain a better understanding of what life is really all about.

People with kids can't go wrong by teaching them how to fish. I have heard it said before that kids with fishing and hunting permits in their back pockets don't end up in the courthouse. Take your kids or your friends' or relatives' kids fishing today. You might just get them hooked for life.

Remember, any person 15 years of age or younger may take fish without permit, but are limited to the following methods: pole and line, gig, longbow, crossbow, snaring, grabbing and snagging. Also, don't forget that Free Fishing Days fall on June 10-11. On these days, any person may fish without permit, trout permit or daily trout tag at most locations. Creel and size limits and method restrictions still must be observed.

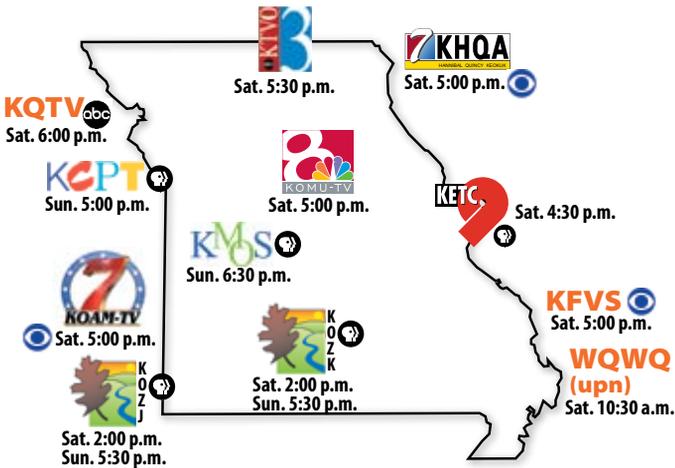
Have a great day, take a kid fishing! —Ric Bishop, Shelby County





Program Schedule

Television the way Nature intended!



For additional show information and video clips, be sure to check our Web site at <http://mdc4.mdc.mo.gov/tv/>.

SHOW SCHEDULE

May 6 & 7—EAGLES & TURKEYS

See how eagle and turkey populations have rebounded in Missouri.

May 13 & 14—ST. LOUIS ZOO

See how research and education at the St. Louis Zoo plays a big role in the future of some endangered species.

May 20 & 21—HIKING

Discover the many different ways you can enjoy hiking in the Show-me state.

May 27 & 28—BIRDING

Meet some folks who enjoy birding with a special hands-on approach.

Jun 3 & 4—FISH

Check out some unusual fish you might not be familiar with.

OTHER OUTLETS (Previously aired episodes are also shown on the following)

Blue Springs CTV7
Brentwood BTV-10 Brentwood City Television
Columbia CAT3
Columbia Columbia Channel
Hillsboro JCTV
Independence City 7 Cable
Joplin KGCS-TV57
Kearney Unite Cable
Parkville GATV
Perryville PVTV
Platte City Unite Cable

Poplar Bluff Poplar Bluff City Cable
Ste. Genevieve Ste. Genevieve Cable
St. Charles SC20 City Cable
St. Louis Charter Cable
St. Louis Cooperating Schools Cable
St. Louis City TV 10
St. Peters St. Peters Cable
Springfield KBLE36/MediaCom
Sullivan Fidelity Cable
West Plains OCTV

Meet Our Contributors



Holly Berthold is a metro media specialist for the Conservation Department in the St. Louis Region. She has always been happiest outside, whether hiking, boating, fishing or getting muddy in the garden. Holly lives with her husband, Bob, and several fuzzy, un-trainable but good-natured animals in Eureka.

Brad McCord is the agricultural programs coordinator for the Department. His responsibilities include working with agricultural groups and conservation organizations, and administering landowner cost share and incentive programs. Brad and his wife, Jennifer, live in California, Mo., with their two daughters.



Kevin Richards, the Department's fisheries field operations chief, is dedicated to helping folks understand catch-and-release methodology. His wife, Donna, also works for MDC. Their kids were teenagers before they realized some families go on vacations that don't include fishing.

Tim Smith is a botanist and resource scientist in the Conservation Department's Jefferson City office. He works to conserve Missouri's native plant diversity by protecting rare species and combating invasive exotics. He lives in Jefferson City with his wife, Leah, daughter, Anna, and son, Henry.



John Vogel is a wildlife management biologist with the Conservation Department in the St. Louis Region. He enjoys hunting and fishing, as well as mountain biking, kayaking, hiking and orienteering with his wife, Yvonne. They are looking forward to introducing their new son, Beck, to the great outdoors.



To learn about bobwhite quail management and Missouri's quail recovery efforts, check out www.missouriconservation.org
Keyword: quail



Stilted stalking

May is a good month to see black-necked stilts and other shorebirds on wetland mudflats. For location suggestions, visit: www.missouriconservation.org/areas.—*Jim Rathert*



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